Declining and Emerging Technology

March 30, 2014

1. Declining Technology

    a. Mainframe TextDBMS System - Steve Eller

The Branch uses a mainframe system called TextDBMS to update and maintain the MCA. The Branch has extensively used the programming language for TextDBMS to enhance the process used to update and maintain the MCA. The Branch has a significant investment in this system, which it has used for the last 24 years. The system currently meets all of the needs of the Branch and requires very little maintenance. However, the original owners of TextDBMS are no longer involved in the legislative market. About 14 years ago, the original owner sold the rights to TextDBMS to a small company (two to three employees), which the Branch currently contracts with for support. Additionally, since mainframes are a declining technology, it becomes more and more difficult to hire mainframe programmers. This system is no longer viable, and its replacement is underway (planning stages).

    b. LAWS Web Pages - Steve Eller

The Branch has developed a system to process and track bills as they move through the legislative process. This system is called the Legislative Automated Workflow System or LAWS and was originally developed in 1997-98. LAWS has a web interface to all of its data. Since the LAWS web interface was developed in 1997, the Branch website has been redesigned and undergone major changes. Also since 1997, web technology has moved forward significantly. These two factors combined have made the LAWS web interface not compatible (i.e. not have the same look and feel) with the rest of the Branch website. At some point in the near future, the web interface to LAWS will need redesigning to bring it up to date with current web technology and the rest of the Branch website. The update is currently being planned.

    c. WordPerfect and WordPerfect Macros - Steve Eller

The bills, journal, and committee minutes processing part of LAWS and also some of the Branch's office processes are written in WordPerfect. The word processing part of the LAWS system was developed in 1997-98 using the WordPerfect macro language. The Branch upgraded to release 12 of WordPerfect during the 2006-07 biennium and is currently on a supported release of WordPerfect. WordPerfect has a small percentage of the market share for word processors. WordPerfect was recently sold to a private investor and therefore the company that owns WordPerfect is no longer publicly traded. Thus it is difficult to determine the financial status of the company—i.e., whether or not they are on the verge of going out of business. The Branch needs to continually evaluate this product and the company's performance in order to be prepared to replace it if necessary. There are plans being developed for the replacement of WordPerfect.

d. Data Analytics - Steve Eller

Presently data is analyzed in the Branch using desktop-based tools including databases, spreadsheets, and statistical analysis tools. All three divisions use a variety of tools; however those in the Fiscal Division are most complex and compressive. The Fiscal Division tools are based on a declining set of technologies such as Lotus Approach. Furthermore, the toolset is an example where, in an effort to be responsive and innovative, the non-IT staff in the Fiscal Division created an enterprise analytical system using nonenterprise-level tools. The solution was built up incrementally over years using tools on hand rather than having been specifically designed and architected as an enterprise system.

e. Montana Budget Analysis and Reporting System (MBARS) - Steve Eller

MBARS is a system used by both the Executive and Legislative Branches. It is used before the legislative session to prepare the executive budget recommendations. During the session, the system is used to track budget decisions as the Legislature establishes appropriations policy. Upon completion of the session, the system is used to load the state accounting system with legislatively approved budget information. MBARS was developed for the state by a private contractor in 1997-98. It was first used for the 1999 legislative session. The vendor that supports MBARS has indicated that the software platform used to develop the system is difficult to support because the tools are no longer current technology, and thus it is difficult to find people knowledgeable in their use. There is a funded project (under Executive Branch funding) that will replace MBARS with its successor, iBARS. There are plans to have some of this ready for the 2015 session, with the remainder ready for 2017.

f. Web Development Environment - Steve Eller

The Branch has a long history of publishing information for internal and public use. The publishing function in the Branch has been and continues to be transitioning from traditional paper-based publications to web-based publications. With the increasing use of electronic content, the possibilities for richer functionality and more sophisticated and interactive presentation arise. In order to take advantage of these capabilities of the web, the Branch's web development environment must be modernized. This effort is a consideration for upcoming years and will be coordinated with other redevelopment projects such as the Session System Replacement.

g. Capital Audio and Video - Steve Eller

The trend in the Branch has been to increase access to live streaming audio and video for legislative proceedings. This has driven the need to upgrade the streaming infrastructure, which now has the capacity and capability to handle future requirements. The limitation in the system is now the aging camera, microphone, and production systems. The capture and processing of audio and video for streaming and on-demand distribution is predicted to be an upcoming technology investment area for the Branch.

2. Emerging Technology

a. Remote Desktop Solutions - Darrin McLean

The current remote connection solution the Branch utilizes is an enterprise-based solution requiring a lot of expertise to maintain. The Branch will be analyzing ways to enhance the remote solution for our current off-site users, while putting a solution in place that will help free IT resources and give our users a true desktop-based remote connection.

b. Enterprise Information Archiving - Darrin McLean

The Branch, as with most government agencies, strives to foster openness in government through the presentation of information. The functions of the Legislative Branch have important historical and legal consequences. Because the Branch produces information and increasingly the information of record is produced and stored entirely electronically, it must consider the retention of this electronic information. This area is a mix of technical and business considerations that include:

- Statewide Archiving Policy
- Branch Archiving Policy
- Public Records Information versus Personal Information Segregation
- Privacy Concerns
- Security Concerns
- Historical Record Information
- Legal Holds
- Litigation Threats
- Technology Capabilities and Limitations

While the proposed projects for FY 2014-2015 included an initial solution, we expect the needs in this area to be a focus for several bienniums to come.

c. Electronic Documents and Electronic Readers - Steve Eller

The trends towards paperless publications, rich electronic content, and mobile computing have to be considered in the Legislative Branch's technology strategy. The expectations for tablet, eReader (i.e. Kindle), and other electronic means of displaying text are already emerging related to the documents published by and consumed by the Branch. There have been some informal trials to reformat documents to be readable by these types of devices. The Branch does not have the expertise or experience to truly understand the impact of the eventual support for this presentation media. The support for and use of electronic mobile reading tablets for published documents will be more thoroughly studied. Areas to be examined will include the publication and formatting tools, rich content, indexing, devices, security, and support.